

REMARKS/ARGUMENTS

Request to Withdraw Improper Final Rejection

In the first office action dated June 23, 2005, the Examiner rejected the claims under 35 U.S.C. § 102(e) as being anticipated by Trent, Jr. et al. (US 2004/0252109), or under 35 U.S.C. § 103(a) as being unpatentable over Trent, Jr. et al. in combination with other secondary references. As explained in the Amendment filed on September 16, 2005, Trent, Jr. et al. is not prior art under 35 U.S.C. § 102(e).

The Examiner has withdrawn the rejections based on Trent, Jr. et al., and has issued new rejections. As stated in MPEP 706.07(a), "second or any subsequent actions on the merits shall be final, *except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).*" Therefore, the present final rejection is improper. Applicants respectfully request withdrawal of the improper final rejection.

Response to New Rejections

Claims 1-5 and 16-25 are pending, of which claims 1-5 and 21-24 have been withdrawn.

Claims 16, 17, 19, and 25

Claims 16, 17, 19, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowles et al. (US 5,163,161) in view of Ikemori et al. (US 5,358,230). The Examiner recognizes that Bowles does not disclose a ratchet mechanism for the volume control dial, and cites Ikemori et al. for allegedly providing the missing teaching.

Applicants respectfully submit that independent claim 16 is patentable over Bowles et al. and Ikemori et al. because, for instance, they do not teach or suggest a volume control dial including a cylinder having an undulating surface and an axis generally

perpendicular to the keyboard surface; and a spring being biased against the undulating surface of the cylinder to produce a ratcheting movement of the cylinder during rotation of the cylinder to provide tactile user feedback.

While Bowles discloses a volume knob 104 on a keyboard, Ikemori et al. discloses a spring clutch 60 in a sheet supplying apparatus, wherein "the transmission of the driving force to the sheet supply roller 23 is effected by using a spring clutch so that the sheet supply roller is selectively rotated in a normal direction during the sheet supplying operation" (col. 10, lines 37-41). As shown in Figs. 16 and 17 in Ikemori et al., the spring clutch 60 includes a control ring 71 mounted around a clutch spring 61, ratchet grooves are formed on the outer surface of the control ring 71, and a pawl 67a of a ratchet member 67 is engaged by one of the ratchet grooves (col. 12, lines 11-27).

Applicants respectfully submit that there is no motivation to combine the references without the benefit of hindsight. Federal Circuit "case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *In re Dembicza*k, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999) (citations omitted).

Bowles et al. is directed to a volume knob for a keyboard. Ikemori et al. relates to a spring clutch in a sheet supplying apparatus. These references disclose completely different apparatus for performing distinct, unrelated functions. In the present invention, the cylinder of the user-manipulable volume control dial has a cylinder with undulating surface and a spring is biased against the undulating surface to produce a ratcheting movement to provide tactile user feedback. The spring clutch in Ikemori et al. does not provide tactile user feedback. Nothing in Bowles et al. suggests tactile user feedback for the volume knob.

There is an utter lack of motivation to combine these references. To guard against the tempting trap of hindsight, the evidence of a suggestion, teaching, or motivation to combine "must be clear and particular." *Dembicza*k, 50 U.S.P.Q.2d at 1617 (citation omitted). "Broad

conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *Id.* (citations omitted). "Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." *Id.* (citing *Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985)). Just because the different elements from the two references may be pieced together does not constitute evidence of a motivation to combine them.

In addition, Applicants respectfully submit that Bowles et al. and Ikemori et al. are non-analogous art. Ikemori et al. is outside the field of Applicants' endeavor and is not reasonably pertinent to the particular problem that the inventors addressed. To determine if a reference may be properly relied upon to make out a *prima facie* case of obviousness, the inquiry is two-fold. The first inquiry is whether the reference is within the field of the inventors' endeavor. The second is whether the reference is reasonably pertinent to the particular problem that the inventors were trying to solve. *In re Clay*, 23 U.S.P.Q.2d 1058 (Fed. Cir. 1992); *In re Wood*, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979); *In re Deminski*, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986). In this case, the differences of the two references are summarized in the table below.

Comparison of Features	Bowles et al.	Ikemori et al.
Type of apparatus	Computer keyboard	Sheet supplying apparatus
Cylindrical member	Volume knob	Control ring mounted around a clutch spring to effect transmission of driving force to a sheet supply roller
Ratchet function	N/A	To effect transmission of driving force to the sheet supply roller so that the sheet supply roller is selectively rotated in a normal direction during the sheet supplying operation

Applicants' invention relates to a user-manipulable volume control dial disposed on a keyboard surface for controlling an audio volume of the computer. The ratchet mechanism provides tactile user feedback for the volume control dial. Bowles et al. disclose a volume knob, but fails to teach a ratchet mechanism for the volume knob to provide tactile user feedback.

In contrast, Ikemori et al. is directed to a sheet supplying apparatus. The transmission of the driving force to the sheet supply roller 23 is effected by using the spring clutch 60 so that the sheet supply roller is selectively rotated in a normal direction during the sheet supplying operation. The spring clutch 60 includes a control ring 71 mounted around a clutch spring 61, ratchet grooves are formed on the outer surface of the control ring 71, and a pawl 67a of a ratchet member 67 is engaged by one of the ratchet grooves. The control ring 71 is not manipulated by a user and is not exposed to be user-manipulable. The ratchet mechanism in Ikemori et al. is provided so that the sheet supply roller is selectively rotated in a normal direction during the sheet supplying operation. It does not and cannot provide tactile user feedback.

A person of ordinary skill in the art would not have expected the design of a spring clutch for a sheet supplying apparatus to have any bearing on the design of a user-manipulable volume control dial for a computer. Therefore, Ikemori et al. is not analogous to the problem Applicants sought to solve and cannot be properly relied upon in sustaining an obviousness rejection. The combination of elements from nonanalogous sources, in a manner that reconstructs Applicants' invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. *In re Clay*, 23 U.S.P.Q.2d 1058 (Fed. Cir. 1992).

For at least the foregoing reasons, independent claim 16, and claims 17, 19, and 25 depending therefrom, are patentable over Bowles et al. and Ikemori et al.

Claim 18

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowles et al. in view of Ikemori et al. and Charlton (US 5,929,774). The Examiner recognizes that Bowles et al. and Ikemori et al. do not disclose that the volume control dial is movable toward and away from the keyboard surface, and cites Charlton for allegedly providing the missing teaching.

The Examiner does not assert that Charlton also discloses that *the spring, which is biased against the undulating surface of the cylinder to produce a ratcheting movement of the cylinder as recited in claim 16 from which claim 18 depends, biases the volume control dial away from the keyboard surface*. Charlton clearly does not teach or suggest this feature. Charlton discloses an ON/OFF switch or button 34, not even a volume dial and certainly not a volume dial that is biased away from the keyboard surface by a spring which is biased against a ratchet member. Moreover, Charlton does not cure the deficiencies of Bowles et al. and Ikemori et al., in that Charlton also fails to teach or suggest a spring being biased against the undulating surface of the cylinder to produce a ratcheting movement of the cylinder during rotation of the cylinder to provide tactile user feedback.

Therefore, claim 18 is patentable not only due to its dependency from allowable claim 16, but also because it recites features not taught or suggested in the cited references.

Claim 20

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowles et al. in view of Ikemori et al. and Nakada et al. (US 3,902,398). The Examiner recognizes that Bowles et al. and Ikemori et al. do not disclose the photoemitter and photodetector, and cites Nakada et al. for allegedly providing the missing teaching.

The Examiner does not assert that Nakada et al. discloses *a cylinder of a volume control dial including a plurality of slits*. Instead, Nakada et al. discloses a shutter plate 15. Further, Nakada et al. does not cure the deficiencies of Bowles et al. and Ikemori et al., in that Nakada et al. also fails to teach or suggest a spring being biased against the undulating surface of the cylinder to produce a ratcheting movement of the cylinder during rotation of the cylinder to provide tactile user feedback.

Therefore, claim 20 is patentable not only due to its dependency from allowable claim 16, but also because it recites features not taught or suggested in the cited references.

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Examining Group 2854

PATENT

Withdrawn Claims 1-5 and 21-24

Withdrawn claims 1-5 and 21-24 depend from claim 16, and are thus also allowable. Applicants respectfully request that claims 1-5 and 21-24 be reinstated and allowed in the present application.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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